

FINAL INSPECTION REPORT
United States Environmental Protection Agency (EPA) Region 4
Air Enforcement Branch

I. GENERAL INFORMATION

Facility Name: Seminole Road Municipal Solid Waste Landfill

Location (Address): 4203 CleveMont Road, Ellenwood, Georgia 30294, DeKalb County

Inspection Dates: September 20, 2022, and October 20, 2022

Type of Inspection (Full or Partial Compliance Evaluation):
Partial Compliance Evaluation

ICIS-Air Number: 04-13-089-00299

EPA Investigator(s)/Inspector(s):
David Lloyd

State/Local Investigator(s)/Inspector(s):
Kenneth Phillips

Person(s) Contacted at Facility (Name and Title):

1. Roger Young, Superintendent, Seminole Road Landfill
2. Kelly Ammons, Landfill Assistant Superintendent
3. Sharwin Singh, SCS Engineers
4. Clint Kuntz, SCS Engineers
5. Gregg Hansen, SCS Engineers (9/20 only???)

Report Prepared by: David Lloyd

II. FACILITY INFORMATION

A. Facility and Permit Information

Facility and Permit Information	Comments
1. Type of facility (e.g., chemical plant, refinery, cement manufacturer, etc.).	Municipal Solid Waste Landfill
2. Air permit number(s) and type of permit (e.g., Title V, PSD, Synthetic Minor, etc.).	Title V permit # 4953-089-0299-V-04-01
3. Air permit issuance date.	July 31, 2018
4. Air permit expiration date.	July 30, 2023
5. Facility classification (Major, Synthetic Minor/Conditional Major, Minor).	Major Source
6. Major source pollutants (if applicable).	HAPs
7. Applicable regulations (e.g., State Implementation Plan, MACT Subpart FFFF, NSPS Subpart EEEE, etc.).	40 C.F.R. Part 60, Subpart A 40 C.F.R. Part 60, Subpart WWW 40 C.F.R. Part 61, Subpart A 40 C.F.R. Part 61, Subpart M 40 C.F.R. Part 63, Subpart A 40 C.F.R. Part 63, Subpart AAAA
8. Types of air emission points (e.g., tanks, process vents, boilers, etc.).	Gas collection and control system (GCCS)
9. Types of air pollution control equipment (e.g., baghouse, scrubber, afterburner, etc.).	Two flares, electric generation facility

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B. Process Description (provide narrative or attach description provided by the company or excerpts from the permit)

Seminole Road Municipal Solid Waste (MSW) Landfill receives municipal and industrial solid waste. The waste is deposited into the landfill, compacted, and covered with fill dirt or other suitable cover, on a daily basis. Landfill gas (LFG) is produced from the decomposition of the buried waste; it is composed primarily of methane and carbon dioxide and contains a small percentage of non-methane organic compounds (NMOC). The landfill operates a regulated gas collection and control system (GCCS) and a 2,100 standard cubic feet per minute (scfm) open flare (F1) and a 40 MMBtu/hr enclosed flare (F2). These flares serve as the backup control devices.

III. INSPECTION ACTIVITIES

Activity	Yes No NA	Comments
Opening Meeting		
1. Date and time entered the facility.	Y	EPA Region 4 (R4) inspected the facility on two separate dates to observe surface emissions monitoring conducted by the facility. The facility's Title V permit and the underlying regulations require surface monitoring on a quarterly basis. The inspector arrived at 9:35 a.m. on September 20, 2022, to observe the initial third quarter surface monitoring activities, and returned to the facility on October 20, 2022, at 8:25 a.m. to observe follow-up surface monitoring at locations initially sampled on September 20 and found to have methane at the landfill surface at a concentration greater than 500 ppm.
2. Credentials presented to facility personnel (include name and title).	Y	The EPA inspector presented credentials to Roger Young, Superintendent for the facility, as well as other officials present.

Activity	Yes No NA	Comments
3. Conducted an opening meeting to explain the purpose and objectives of the inspection.	Y	A brief opening meeting was held each day during which it was explained that the purpose of the inspection was to observe landfill surface monitoring activities conducted by the facility.
4. Discussed safety issues.	Y	The EPA Inspector wore the appropriate PPE as well as the standard yellow vest required by the facility. The EPA inspector was accompanied by landfill personnel while walking and driving around the facility.
5. Discussed which records to be reviewed.	Y	See item 10
6. Discussed the facility walk-through and the areas to be observed in the facility.	Y	The EPA inspector explained that the purpose of the inspection was to observe landfill surface sampling conducted by the facility.
7. Discussed facility policy regarding photographs or video (if applicable).	Y	The inspector explained that any photographs taken would be provided to the facility.
8. Discussed the use of the infrared camera, TVA, PID, and any other equipment.	N/A	Only a standard digital camera was used during the inspection.
9. Discussed CBI.	Y	The EPA inspector indicated that any documents claimed to be Confidential Business Information (CBI) would be treated in accordance with the regulations.
Records Reviewed at the Facility		
10. The types of records reviewed and the time period reviewed.	Y	Records were not reviewed at the facility. A request was made to obtain a spreadsheet of landfill gas flow data for the landfill gas collection system for a period of one year, and the semi-annual reports for the second half of 2021 and the first half of 2022. This information was received via email after the inspection.
Facility Walk-Through Observations		

Activity	Yes No NA	Comments
<p>11. The process equipment observed and the associated operational rate observed (e.g., Furnace 1 production rate was 5 lbs/hr on 1/1/15, at 2:00 pm – permit requires max rate at 6 lbs/hr).</p> <p>Provide the date and time the information was recorded by the inspector.</p> <p>Identify the permit limit (if applicable).</p> <p>An attachment may be used for a large amount of information.</p>	Y	<p>Observations made during the inspection and a description of photographs taken are recorded in Attachment A of this report.</p>
<p>12. The type of process parametric monitoring observed and the associated value observed (e.g., Furnace 1 flux injection rate was 200 lbs/batch at 1/1/15, at 2:00 pm – permit requires max rate at 225 lbs/batch).</p> <p>Provide the date and time the information was recorded by the inspector.</p> <p>Identify the permit limit (if applicable).</p> <p>An attachment may be used for a large amount of information.</p>	N/A	

Activity	Yes No NA	Comments
13. If process equipment or parametric monitoring equipment was not operating, state the reason by facility personnel why the equipment was not operating.	N/A	
<p>14. The type of air pollution control equipment, the process equipment it is controlling, and the associated parametric monitoring value observed (e.g., baghouse pressure drop, temperature, scrubber flow rate, etc.).</p> <p>(For example - RTO 1 controlling furnace 1, 1,500 degrees F on 1/1/15, at 2:00 pm – permit requires 1,400 degree F or higher).</p> <p>Provide the date and time the information was recorded by the inspector.</p> <p>Identify the permit limit (if applicable).</p> <p>An attachment may be used for a large amount of information.</p>	N/A	

Activity	Yes No NA	Comments
<p>15. Continuous emissions monitoring devices and values observed. (e.g., CEMS, COMs, etc.).</p> <p>Provide the date and time the information was recorded by the inspector.</p> <p>Identify the permit limit (if applicable).</p> <p>An attachment may be used for a large amount of information.</p>	N/A	
<p>16. If air pollution control equipment was not operating, state the reason by facility personnel why the equipment was not operating.</p>	N/A	
<p>17. Capture and collection system (enclosures and hoods) observations, if applicable (e.g., the magnitude and duration of emission escaping capture from the hood).</p>	N/A	
<p>18. Ductwork transferring the emissions to the air pollution control device observations, if applicable (e.g., the magnitude and duration of emission escaping from the ductwork, holes or deterioration in ductwork, no deterioration observed, etc.).</p>	N/A	

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Activity	Yes No NA	Comments
19. Any existing unpermitted emission points, new unpermitted emission points, or non-permitted construction activities observed. (if yes, describe in the comments field).	N/A	
20. Were any visible emissions observed? (if yes, identify the location and equipment).	N	
21. Was a Method 9 reading performed? (if yes, identify the location and equipment).	N	
22. Was the cause of the visible emissions investigated and the information documented?	N/A	
23. Was a Method 22 performed for visible emissions? (if yes, identify the location and equipment).	N	
24. Identify the cause of the visible emissions as explained by facility personnel, if applicable.	N/A	
25. Was the infrared camera used? If so, attach the video log (which includes the equipment ID, and the date and time the video was recorded) and videos to this report.	N	

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Activity	Yes No NA	Comments
<p>26. Was the TVA used? If so, identify the equipment monitored and the results.</p> <p>Provide the date and time the information was recorded by the inspector. Include actual instrument readings for each piece of equipment monitored above the leak definition and/or where the infrared camera identified a release.</p> <p>An attachment may be used for a large amount of information.</p>	N	
<p>27. Was the PID used? If so, identify how the PID was used and the results.</p> <p>Provide the date and time the information was recorded by the inspector.</p> <p>An attachment may be used for a large amount of information.</p>	N	
Closing Meeting		
28. Conducted a closing meeting.	Y	Items discussed are provided in Attachment A.
29. Summarize any additional information needed, if applicable?	N/A	
30. Accept a declaration of CBI, if applicable?	N/A	

Activity	Yes No NA	Comments
31. Discussed observations.	Y	The inspection team discussed the results of surface methane readings observed with facility representatives. It was noted that there appeared to be a high prevalence of surface methane concentrations above 500 ppm associated with landfill gas collection system wells and other penetrations of the landfill cap, particularly on the east side of Phase 3 of the landfill.
32. Discussed next steps, if applicable?	Y	It was communicated that the facility would be sent a draft inspection report so they could review it for CBI content.
33. Date and time inspection concluded.		September 20, 2022: departed facility at 1:30 p.m. October 20, 2022: departed facility at 12:50 p.m. and visited adjacent neighborhood at 12:55 p.m. .
Miscellaneous		
34. Include any additional observations, if applicable.	N/A	

EPA Investigator/Inspector Signature: _____

EPA Supervisor Signature & Title _____

Chief, North Air Enforcement Section

Date Report Finalized: December 1, 2022_____

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Document Number: AEBFORM-012-R0
Title: Inspection Report Template
Effective Date: May 6, 2019

Attachment A – Inspection Activities and Observations

September 20, 2022

- 9:24 a.m.: Inspector noted strong odor of landfill operations in the neighborhood adjacent to the east of the landfill, at the corner of River Mill Lane and Garden Mill Terrace. Winds at the time were out of the west. Two photographs were taken: P9200485.jpg and P9200486.jpg.
- 9:30 a.m.: Inspector noted strong odor of landfill operations adjacent to 3416 Rockmill Dr. One photograph was taken: P9200587.jpg.
- 9:35 a.m.: Inspector arrived at facility and discussed the objectives of the inspection with facility personnel as well as SCS Engineers personnel, which were to observe Method 21 landfill surface monitoring sampling activities for the 3rd quarter, 2022, that were scheduled to commence that day. SCS calibrated the Inficon Erwin methane leak detector using a 500-ppm canister of methane and a zero-gas canister. SCS stated that they would be using a 5 second response time during the inspection and would thus pause 10 seconds at sampling locations per Method 21 to allow the monitor to read the maximum methane concentration present. The EPA inspector was asked by SCS if he had a preference on where on the landfill they should begin monitoring. The EPA inspector provided a printout of a map of methane emissions identified through areal monitoring of the facility by Carbon Mapper (Carbonmapper.org) conducted in April 2022 and requested that SCS begin surface monitoring along the eastern side of Phase 3 where the areal data indicated the highest concentrations of methane.
- 10:32 a.m. EPA and DAQ inspectors waited at the SE corner of phase 3 (coordinates 33.66076, -84.25543) while SCS collected upwind and downwind methane readings before beginning surface monitoring. The upwind methane reading was zero and the downwind reading was 2 ppm. Several photographs were taken from this location including:
 - o P9200488.jpg – a view of the landfill to the west of an area that had active waste disposal ending in July 2021.
 - o P9200489.jpg – a view of the landfill to the north of an area that had not received waste in approximately 12 years.
 - o P9200490.jpg – the sampling probe with the sampling tube intake taped to a hiking pole approximately 5 inches from the bottom end.
 - o P9200491.jpg – the Inficon sampling device readout screen/control panel.
- In response to a question about the optimum oxygen content of landfill gas used to power the electricity generators, it was indicated that concentrations over 1.5% were “bad” for the engines and that 5% was a “hard limit.”
- 10:50 a.m.: SCS began surface monitoring by moving slowly to the north along the edge of waste of phase 3 of the landfill (i.e., monitoring the eastern edge of phase 3). It took 11 minutes for SCS’s sampler, Clint Kuntz to walk and collect samples between the location beginning near coordinates 33.66076, -84.25543 and ending near coordinates 33.664502, -84.255309, which equates to a pace of about 1.4 miles/hour.

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- 11:03 a.m.: SCS began monitoring landfill cap penetrations associated with leachate collection system (LCS) sump LCSW-1. A photo was taken of this area showing the penetrations and the leachate collection system control box: #P9200492.jpg. Mr. Kuntz operated the monitor by sampling at multiple points around each LCSW-1 penetration and paused approximately 10 seconds to allow the monitor to respond. Mr. Kuntz explained that standard practice when monitoring locations with multiple penetrations is to sample them all and record the penetration with the highest concentration of methane. Initially, Mr. Kuntz measured a methane concentration at LCS W-1 of 2,000 ppm. During the time it took to monitor the landfill cap penetrations associated with LCS-1, facility personnel turned on the leachate pump. Lowering the leachate levels in the leachate collection wells apparently acts to lower the amount of methane that reaches the landfill surface.
- 11:18 a.m.: Observed SCS monitoring the three landfill cap penetrations associated with gas collection well GNO5 (coordinates: 33.664510, -84.25570). For these penetrations, SCS monitored at only one point around each of them and did not wait the required 10 seconds for the monitor to respond. The EPA inspector communicated concerns to Mr. Young that based on the observed monitoring of the GNO5 penetrations, the facility had not met the requirements of Method 21 to sample and record the highest methane concentrations and to sample for twice the response time of the instrument. The EPA inspector did not have the same concerns for the subsequent monitoring of cap penetrations observed that day.
- 11:25 a.m. to 12:46 p.m. – SCS monitored surface emissions at multiple penetrations on the east side of Phase 3, Cell #1. The results recorded by the inspector include the following (SCS will generate a report with all the results):
 - o Methane concentration >500 ppm at access riser next to air valve #6 (33.662093, -84.255230)
 - o Methane concentration of 8,000 ppm at gas collection well #82 (33.662171, -84.256000). This gas collection well was confirmed to be under negative pressure.
 - o Methane concentration of 1,700 ppm at gas collection well #81.
 - o Methane concentration of 1,500 ppm at gas collection well #80 (33.663094, -84.255809).
 - o Methane concentration of 22,000 ppm at gas collection well #79 (33.663487, -84.255924). A photo of this well was taken: P9200493.jpg. This well was determined to be under negative pressure at the time of sampling.
- SCS's plan was to continue with the standard quarterly surface emissions monitoring later that day and the following day/s. Such subsequent monitoring was not observed by EPA.

Items discussed during a brief closing meeting include the following:

- The EPA inspector noted that the high methane levels monitored that day along the eastern portion of phase 3 appeared to be in the same area where Carbon Mapper (Carbonmapper.org) had identified the most elevated concentrations during flights conducted in April 2022. The

EPA inspector also noted that this area of the landfill is located close to residential areas to the east (about 600' from the edge of waste).

- Landfill personnel described three pending projects expected to improve the landfill gas collection and treatment system:
 - o A project to add an additional 2,100 cfm open flare that will be dedicated to Phase 3 of the facility. Under a new configuration, the existing open flare will serve only the Phase 1/2 portion of the facility.
 - o A project to add 32 gas collection wells to Phase 3 of the landfill, including 8 “redrills” of existing wells. These plans do not include additional wells or replacement wells in areas where surface monitoring was observed during the inspection.
 - o A project to modify and restart an existing facility to collect and treat landfill gas for pipeline distribution. This project is being implemented and will be operated and maintained by a third party.
- The facility has received an estimated 9 calls/complaints about odor from nearby residents since the beginning of 2022.

October 20, 2022

- 8:06 a.m.: Inspector noted strong odor of landfill operations in the neighborhood adjacent and to the east of the landfill at the corner of River Road and River Mill Lane. Winds at the time were out of the west.
- 8:09 a.m.: Inspector noted strong odor of landfill operations in the neighborhood adjacent and to the east of the landfill at the corner of River Mill Court and River Mill Lane
- 8:13 a.m.: Landfill odor was noted along Garden Mill Terrace, but not as strong as in the other areas in the neighborhood visited.
- 8:16 a.m.: Strong odor of landfill noted at 3410 Rock Mill Drive.
- 8:25 a.m.: Arrived at the facility and discussed the purpose of the inspection with facility and SCS personnel, which was to observe the required 30-day resampling of the locations originally found on September 20 to have surface methane emissions at concentrations above 500ppm. During the initial quarterly monitoring on September 20 (only a portion of which was observed during EPA’s inspection) there were 9 such locations on Phase 3 of the landfill, and 3 such locations on Phase 1/2 of the landfill. It was explained that for each of these 12 locations a remedy was implemented (such as adding bentonite to seal around a cap penetration), and resampling occurred on September 22. Based on the September 22 monitoring, none of the 12 locations continued to exceed 500ppm.
- 8:50 a.m.: Observed the calibration process for the Inficon monitor device. Calibration gases used were in gas canisters containing 0 ppm methane and 500 ppm methane. The response time for the monitor was determined to be 5 seconds.
- The upwind methane concentration was measured to be 5 ppm and downwind concentration was measured to be 15 ppm. It was explained that for determining upwind and downwind

concentrations, the monitoring device takes the maximum methane reading over a period of 30 seconds.

- 9:37 a.m.: Observed the sampling of a penetration located at 33.662061, -84.255310. The reading was 4 ppm. The sampling point was 5" above landfill surface.
- Observed sampling of Leachate Collection System wells LCS W-1. Facility personnel turned on the leachate pumps for the collection system before the monitoring began. Maximum methane concentration was 110 ppm. There was no evidence that any sort of remedy had been attempted at this location since the initial September 20 monitoring.
- 9:55 a.m.: Landfill personnel indicated that the current total landfill gas flow through the collection system was in the range of 1,460-1,480 cfm and that two electricity generators were running. The energy plant has a capacity to accept up to 1,200 cfm of landfill gas. The minimum flow to the flare needed to sustain a flame is 250 cfm. The minimum flow that each generator is capable of is about 200 cfm.
- 10:04 a.m.: Observed sampling of gas well N79 located at 33.663487, -84.255924. The maximum methane reading was 1,483 ppm. The well had recently had bentonite added around it. The bentonite was very dry. Photograph PA200494.jpg was taken of this well at 11:11 a.m.
- Observed sampling of gas collection well penetrations located at 33.663042, -84.25585. Before sampling began, facility personnel opened a valve to turn on the leachate pump at this well. The maximum methane reading was 354 ppm. The valve was closed to turn off the leachate pump after surface monitoring was complete. Bentonite had recently been added around this well.
- 10:27 a.m.: Observed monitoring of penetrations for gas well #81 located at 33.662554, -84.255872. The maximum methane concentration was 9,389 ppm
- 10:36 a.m.: Observed monitoring of penetrations for gas well #82 located at 33.662126, -84.255947. The maximum reading was 683 ppm. Sampling was conducted greater than 5" above the surface of the landfill.
- 10:45 a.m.: Observed sampling of the N9 penetration located at 33.662680, -84.255435. The maximum methane concentration was 170 ppm.
- 11:09 a.m.: Observed an attempt to find and resample a surface location (not a penetration) monitored originally on 9/20/22. The sampling team was unable to find the location, but were looking in the vicinity of 33.662360, -84.260084. There was no indication that a remedy, such as adding soil, had been recently attempted in this area.
- 11:23 a.m.: Observed sampling of the N256 gas collection well penetrations located at 33.662360, -84.259329. The maximum methane concentration was 370 ppm.
- 11:55 a.m.: Observed monitoring of gas collection well N32 located on Phase 1/2 of the landfill. The maximum methane reading was 859 ppm. The leachate pump present in this well was on before the sampling team arrived. The leachate pump valve was in the open position as we approached the area and was turned to the off position as the sampling was conducted. It was then turned back on when we left the area. Photograph PA200495.jpg was taken, which shows the valve controlling the light blue line in the state it was as we left the area. Bentonite had recently been deposited around the well.

- 12:10 p.m.: Observed monitoring of gas collection well GEW 39 located at 33.652001, -84.259056. The maximum methane concentration was 982 ppm. This well did not have a leachate pump.
- Observed sampling of GEW 49 located at 33.653179, -84.260015. The maximum methane concentration was 7,000 ppm.
- In response to a question about leachate pumps for those wells that have them, landfill personnel responded that the leachate pumps were usually left on.
- 12:31 p.m.: A brief closeout meeting was held in the gazebo on top of Phase 1/2.
- 12:50 p.m.: The EPA inspector exited the facility.
- 12:55 pm: The EPA inspector noted a continued strong odor of landfill in the neighborhood to the east of the facility at 3449 Rock Mill Drive.